NYE-DT 40

Apache Corporation

Unveils New Gassy Play in the Southern Delaware Basin & Increases 2016 Capex; Raising 2P NAV

Announces the discovery of Alpine High play in the southern Delaware Basin

APA announced the discovery of a significant new resource play (the "Alpine High") in the southern Delaware Basin (primarily in southwest Reeves County) where it has accumulated 307,000 net acres over the course of 2015-16 for ~\$1,300/net acre. While the area has received minimal focus from the industry to date (see Figures 1 & 2), APA estimates its position holds 75 Tcf of rich gas & 3 BBbls of oil resource in place in the Barnett & Woodford formations alone with 2,000-3,000+ drilling locations, with oil potential in the shallower Pennsylvanian, Bone Springs, & Wolfcamp formations.

Increases 2016 capex to accelerate Alpine High

APA raised its 2016 capex by ~\$200MM to ~\$2bn to accelerate the delineation & development of the Alpine High play (25% of budget) where APA is running 3 of its 4 Permian rigs & has drilled just 19 wells in the play to date. Looking to 2017, it plans to ramp up to a 4-5 rig program in the Alpine High drilling 60-80 Woodford/Barnett wells, a pace sufficient to hold the acreage. Assuming a 2017 capex of \$2.7bn, we forecast APA's volumes will decline ~3.5% YoY (based on soft guidance of North American volumes resuming sequential growth in 2H17) implying a ~\$400MM FCF deficit (after divi) at strip prices. APA expects North American volumes to resume sequential growth in 2H17, weaker than consensus which shows QoQ growth resuming in 1Q17.

Raising our NAV but APA still appears fully valued vs peers

We've raised our NAV by ~\$13/share to \$53.70/share. Roughly ~\$10/share of our NAV increase is attributed to the new Alpine High play where we assume ~4 BBoe of net resource (62%/27%/11% gas/NGLs/oil) based on the mid-point of APA's wide ranging well economics for the area. Given APA has drilled just 19 wells in the play to date, it is only including resource/inventory potential for Woodford & Barnett shales (upside also exists in the Penn, Wolfcamp, & Bone Spring), & is assuming 4,100' laterals while most of industry is now utilizing +7,000' laterals implying potential upside to our ~\$10/share estimate for the play. We also raised our EURs for the Midland Basin as APA's new wells are tracking a ~1.2 MMBoe type curve (vs. our prior estimate of ~700 MBoe).

Valuation: roughly in line with peers on EV/DACF

Our \$54 PT assumes 5.6x normalized 2017E DACF, in line w/ its hist avg and our NAV.

Equities

Americas

Oil Companies, Secondary

12-month rating

Neutral

12m price target

US\$54.00

Price

US\$51.67 RIC: APA.N BBG: APA US

Trading data and key metrics

US\$58.29-34.38 52-wk range Market cap. US\$19.6bn Shares o/s 379m (COM) Free float 99% Avg. daily volume ('000) 838 Avg. daily value (m) US\$44.7 Common s/h equity (12/16E) US\$7.00bn P/BV (12/16E) 2.8x

EPS (UBS, diluted) (US\$)

		12/16E		
	From	То	% ch	Cons.
Q1	(0.83)	(0.83)	NM	(0.40)
Q2	(0.26)	(0.26)	NM	(0.26)
Q3E	0.02	0.02	0	(0.05)
Q4E	0.12	0.12	0	0.06
12/16E	(0 95)	(0 95)	NM	(0.64)
12/17E	1.65	1.65	NM	1.16
12/18E	2.85	2.75	-4	2.59

William A. Featherston

Analyst william.featherston@ubs.com +1-212-713 9701

Michael Ziffer, CFA

Associate Analyst michael.ziffer@ubs.com +1-212-713 2257

Christopher Zhang, CFA

Associate Analyst christopher.zhang@ubs.com +1-212-713 9957

Highlights (US\$m)	12/13	12/14	12/15	12/16E	12/17E	12/18E	12/19E	12/20E
EBITDX	11,290	9,609	3,537	3,180	4,574	5,516	6,417	6,888
DACF	9,537	7,754	3,222	2,151	3,529	4,264	5,021	5,374
CFPS (UBS, US\$)	22.36	18 94	7.41	4.55	8.10	10.00	11 90	12.75
EPS (UBS, US\$)	8.09	5 93	(0.26)	(0 95)	1.65	2.75	3.80	4.10
Profitability/valuation	12/13	12/14	12/15	12/16E	12/17E	12/18E	12/19E	12/20E
Prod per share growth %	-3 9	-12.4	-13.5	-49	-3.7	2.5	5.6	7.3
ROACE %	7.7	6.6	(1.0)	0.2	69	99	12.3	12.7
EV/EBITDX x	3.8	4.3	8.0	8.3	5.8	4.7	4.0	3.7
EV/DACF x	4.5	5.3	8.7	12.3	7.5	6.1	5.1	4.7
P/CFPS (UBS) x	3.7	4.5	7.3	11.4	6.4	5.2	4.3	4.1

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of US\$51.67 on 06 Sep 2016 19:38 EDT

www.ubs.com/investmentresearch

This report has been prepared by UBS Securities LLC. ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 4. UBS does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Figure 1: Wells Drilled in Reeves County, TX to Date

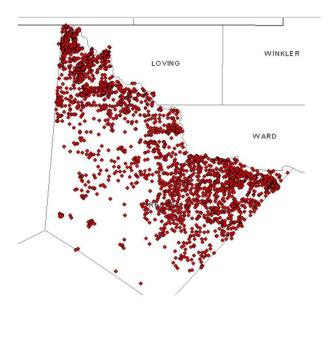
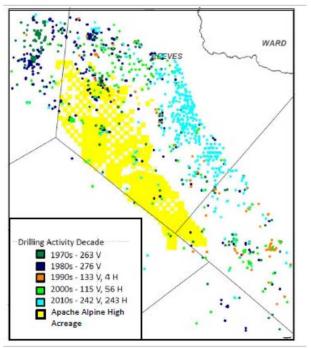


Figure 2: APA's Alpine High Acreage vs. Historical Drilling Activity in Reeves County, TX



Source: Drilling Info Source: Company Presentation

Figure 3: APA's Valuation vs. Peers Under UBS Price Deck and Futures Strip Prices

		EV/DACF Hist. Avg.	Valuation Under UBS Price Deck				Valuation Under NYMEX Strip Prices					
	Price		EV/DACF		P/NAV		EV/DACF		P/NAV			
	9/7/2016		2016E	2017E	2018E	1P	2P	2016E	2017E	2018E	1P	2P
Anadarko Petroleum	\$57.03	6.9x	13 2x	8.4x	7 0x	1.28x	0 62x	13 8x	10.7x	10.4x	1.67x	0.91x
ConocoPhillips	\$41.10	66	11.9	7.1	5.4	NA	NA	12.8	9.5	8.8	NA	NA
Devon Energy	\$43.87	60	15.1	9.9	7.5	1.54	0.98	15.7	13.0	12.2	2.34	2.34
EOG Resources	\$94.20	73	19.8	12.5	8.8	2 07	1.04	20.6	15.6	13.2	NA	NA
Hess Corporation	\$50.62	5.1	15.4	9.4	7.2	1.10	0.74	16.7	12.2	11.4	1.69	1.39
Marathon Oil	\$15.56	5.5	86	80	5.5	1 05	0.62	88	90	8.1	2.21	1.54
Murphy Oil	\$27.60	4.4	8.1	5.4	4.3	1 24	0.73	86	70	6.9	NA	2.36
Noble Energy	\$35.10	7.4	98	8.1	6.0	1.47	0.61	10.1	98	8.4	2.07	0.97
Occidental Petroleum	\$77.05	7.4	16.9	11.9	9.2	1.16	1.04	18.0	15.2	13.8	1.31	1.31
Average		6.3x	13.2x	9.0x	6.8x	1.36x	0.80x	13.9x	11.3x	10.3x	1.88x	1.55x
Apache Corporation	\$55.63	5.5x	13.0x	8.0x	6.5x	1.60x	1.04x	13.8x	10.7x	10.5x	NA NA	NA NA

Source: UBS estimates and Company documents

Note: Based on current NYMEX natural gas, WTI and Brent strip prices (2016- \$2.45/MMBtu, \$42.79/Bbl & \$44.25/Bbl; 2017- \$3.08/MMBtu, \$48.11/Bbl & \$49.28/Bbl; 2018- \$2.96/MMBtu, \$50.24/Bbl & \$52.29/Bbl; 2019- \$2.94/MMBtu, \$50.98/Bbl & \$54.41/Bbl). All figures include the effect of disclosed hedge positions.

Notes: Based on UBS official NYMEX natural gas and WTI and ICE Brent crude oil commodity price forecasts of: 2016- \$2.45/MMBtu, \$43.81/Bbl & \$46.18/Bbl; 2017- \$3.00/MMBtu, \$57/Bbl & \$60/Bbl; 2018- \$3.00/MMBtu, \$60/Bbl; 2018- \$3.00/MMBtu, \$72/Bbl & \$75/Bbl.

Forecast returns

Forecast price appreciation	+4.5%
Forecast dividend yield	2.0%
Forecast stock return	+6.5%
Market return assumption	5.7%
Forecast excess return	+0.8%

Valuation Method and Risk Statement

E&P companies are subject to risks associated with unexpected movements in volatile natural gas and crude oil prices, as well as the impact that political, economic and meteorological events could impart. Moreover, E&P companies are subject to geologic risk (i.e., exploration risk).

Majority of Apache's production comes from outside the US from Canada, Australia, Egypt, North Sea, and Argentina that puts its operation at a higher currency risk than its peer. Moreover, Apache's leverage to worldwide natural gas prices is less apparent. Also, its operations are also levered to higher tax regimes such as Argentina, North Sea and Egypt. Our \$54 PT is based on 5.6x normalized 2017E DACF, in line its historical average.

Required Disclosures

This report has been prepared by UBS Securities LLC, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

For information on the ways in which UBS manages conflicts and maintains independence of its research product; historical performance information; and certain additional disclosures concerning UBS research recommendations, please visit www.ubs.com/disclosures. The figures contained in performance charts refer to the past; past performance is not a reliable indicator of future results. Additional information will be made available upon request. UBS Securities Co. Limited is licensed to conduct securities investment consultancy businesses by the China Securities Regulatory Commission. UBS acts or may act as principal in the debt securities (or in related derivatives) that may be the subject of this report. This recommendation was finalized on: 07 September 2016 04:24 PM GMT.

Analyst Certification: Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers and were prepared in an independent manner, including with respect to UBS, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

UBS Investment Research: Global Equity Rating Definitions

12-Month Rating	Definition	Coverage ¹	IB Services ²	
Buy	FSR is > 6% above the MRA.	47%	32%	
Neutral	FSR is between -6% and 6% of the MRA.	38%	25%	
Sell	FSR is > 6% below the MRA.	15%	21%	
Short-Term Rating	Definition	Coverage ³	IB Services ⁴	
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%	
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%	

Source: UBS. Rating allocations are as of 30 June 2016.

KEY DEFINITIONS: Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months. **Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium). **Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation. **Short-Term Ratings** reflect the expected nearterm (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case. **Equity Price Targets** have an investment horizon of 12 months.

EXCEPTIONS AND SPECIAL CASES: UK and European Investment Fund ratings and definitions are: Buy: Positive on factors such as structure, management, performance record, discount; **Neutral:** Neutral on factors such as structure, management, performance record, discount; **Sell:** Negative on factors such as structure, management, performance record, discount. **Core Banding Exceptions (CBE):** Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Company Disclosures table in the relevant research piece.

^{1:}Percentage of companies under coverage globally within the 12-month rating category.

^{2:}Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

^{3:}Percentage of companies under coverage globally within the Short-Term rating category.

^{4:}Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

Research analysts contributing to this report who are employed by any non-US affiliate of UBS Securities LLC are not registered/qualified as research analysts with FINRA. Such analysts may not be associated persons of UBS Securities LLC and therefore are not subject to the FINRA restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account. The name of each affiliate and analyst employed by that affiliate contributing to this report, if any, follows.

UBS Securities LLC: William A. Featherston; Michael Ziffer, CFA; Christopher Zhang, CFA.

Company Disclosures

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
Apache Corporation ¹⁶	APA.N	Neutral	N/A	US\$51.67	06 Sep 2016

Source: UBS. All prices as of local market close.

Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

UBS Securities LLC makes a market in the securities and/or ADRs of this company.

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report. For a complete set of disclosure statements associated with the companies discussed in this report, including information on valuation and risk, please contact UBS Securities LLC, 1285 Avenue of Americas, New York, NY 10019, USA, Attention: Investment Research.

Apache Corporation (US\$)



Source: UBS; as of 06 Sep 2016

Global Disclaimer

This document has been prepared by UBS Securities LLC, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS

Global Research is provided to our clients through UBS Neo and, in certain instances, UBS.com (each a "System"). It may also be made available through third party vendors and distributed by UBS and/or third parties via e-mail or alternative electronic means. The level and types of services provided by Global Research to a client may vary depending upon various factors such as a client's individual preferences as to the frequency and manner of receiving communications, a client's risk profile and investment focus and perspective (e.g., market wide, sector specific, long-term, short-term, etc.), the size and scope of the overall client relationship with UBS and legal and regulatory constraints.

All Global Research is available on UBS Neo. Please contact your UBS sales representative if you wish to discuss your access to UBS Neo.

When you receive Global Research through a System, your access and/or use of such Global Research is subject to this Global Research Disclaimer and to the terms of use governing the applicable System.

When you receive Global Research via a third party vendor, e-mail or other electronic means, your use shall be subject to this Global Research Disclaimer and to UBS's Terms of Use/Disclaimer (http://www.ubs.com/global/en/legalinfo2/disclaimer.html). By accessing and/or using Global Research in this manner, you are indicating that you have read and agree to be bound by our Terms of Use/Disclaimer. In addition, you consent to UBS processing your personal data and using cookies in accordance with our Privacy Statement (http://www.ubs.com/global/en/legalinfo2/privacy.html) and cookie notice (http://www.ubs.com/global/en/homepage/cookies/cookie-management.html).

If you receive Global Research, whether through a System or by any other means, you agree that you shall not copy, revise, amend, create a derivative work, transfer to any third party, or in any way commercially exploit any UBS research provided via Global Research or otherwise, and that you shall not extract data from any research or estimates provided to you via Global Research or otherwise, without the prior written consent of UBS.

This document is for distribution only as may be permitted by law. It is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or would subject UBS to any registration or licensing requirement within such jurisdiction. It is published solely for information purposes; it is not an advertisement nor is it a solicitation or an offer to buy or sell any financial instruments or to participate in any particular trading strategy. No representation or warranty, either expressed or implied, is provided in relation to the accuracy, completeness or reliability of the information contained in this document ("the Information"), except with respect to Information concerning UBS. The Information is not intended to be a complete statement or summary of the securities, markets or developments referred to in the document. UBS does not undertake to update or keep current the Information. Any opinions expressed in this document may change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS. Any statements contained in this report attributed to a third party represent UBS's interpretation of the data, information and/or opinions provided by that third party either publicly or through a subscription service, and such use and interpretation have not been reviewed by the third party.

Nothing in this document constitutes a representation that any investment strategy or recommendation is suitable or appropriate to an investor's individual circumstances or otherwise constitutes a personal recommendation. Investments involve risks, and investors should exercise prudence and their own judgement in making their investment decisions. The financial instruments described in the document may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates or other market conditions. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument referred to in the document. For investment advice, trade execution or other enquiries, clients should contact their local sales representative.

The value of any investment or income may go down as well as up, and investors may not get back the full (or any) amount invested. Past performance is not necessarily a guide to future performance. Neither UBS nor any of its directors, employees or agents accepts any liability for any loss (including investment loss) or damage arising out of the use of all or any of the Information.

Any prices stated in this document are for information purposes only and do not represent valuations for individual securities or other financial instruments. There is no representation that any transaction can or could have been effected at those prices, and any prices do not necessarily reflect UBS's internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions by UBS or any other source may yield substantially different results.

This document and the Information are produced by UBS as part of its research function and are provided to you solely for general background information. UBS has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient. In no circumstances may this document or any of the Information be used for any of the following purposes:

- (i) valuation or accounting purposes
- (ii) to determine the amounts due or payable, the price or the value of any financial instrument or financial contract; or
- (iii) to measure the performance of any financial instrument.

By receiving this document and the Information you will be deemed to represent and warrant to UBS that you will not use this document or any of the Information for any of the above purposes or otherwise rely upon this document or any of the Information.

UBS has policies and procedures, which include, without limitation, independence policies and permanent information barriers, that are intended, and upon which UBS relies, to manage potential conflicts of interest and control the flow of information within divisions of UBS and among its subsidiaries, branches and affiliates. For further information on the ways in which UBS manages conflicts and maintains independence of its research products, historical performance information and certain additional disclosures concerning UBS research recommendations, please visit www.ubs.com/disclosures.

Research will initiate, update and cease coverage solely at the discretion of UBS Investment Bank Research Management, which will also have sole discretion on the timing and frequency of any published research product. The analysis contained in this document is based on numerous assumptions. All material information in relation to published research reports, such as valuation methodology, risk statements, underlying assumptions (including sensitivity analysis of those assumptions), ratings history etc. as required by the Market Abuse Regulation, can be found on NEO. Different assumptions could result in materially different results.

The analyst(s) responsible for the preparation of this document may interact with trading desk personnel, sales personnel and other parties for the purpose of gathering, applying and interpreting market information. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this document is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues; however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part, and UBS's subsidiaries, branches and affiliates as a whole.

For financial instruments admitted to trading on an EU regulated market: UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this document. For financial instruments admitted to trading on a non-EU regulated market: UBS may act as a market maker save that where this activity is carried out in the US in accordance with the definition given to it by the relevant laws and regulations, such activity will be specifically disclosed in this document. UBS may have issued a warrant the value of which is based on one or more of the financial instruments referred to in the document. UBS and its affiliates and employees may have long or short positions, trade as principal and buy and sell in instruments or derivatives identified herein; such transactions or positions may be inconsistent with the opinions expressed in this document.

United Kingdom and the rest of Europe: Except as otherwise specified herein, this material is distributed by UBS Limited to persons who are eligible counterparties or professional clients. UBS Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

France: Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France S.A. UBS Securities France S.A. is regulated by the ACPR (Autorité de Contrôle Prudentiel et de Résolution) and the Autorité des Marchés Finances (AMF). Where an analyst of UBS Securities France S.A. has contributed to this document, the document is also deemed to have been prepared by UBS Securities France S.A. Germany: Prepared by UBS Limited and distributed by UBS Deutschland AG. UBS Deutschland AG. UBS Deutschland AG. UBS Deutschland AG. UBS Securities España SV, SA is regulated by the Comisión Nacional del Mercado de Valores (CNMV).

Turkey:

Distributed by UBS Limited. No information in this document is provided for the purpose of offering, marketing and sale by any means of any capital market instruments and services in the Republic of Turkey. Therefore, this document may not be considered as an offer made or to be made to residents of the Republic of Turkey. UBS AG is not licensed by the Turkish Capital Market Board under the provisions of the Capital Market Law (Law No. 6362). Accordingly, neither this document nor any other offering material related to the instruments/services may be utilized in connection with providing any capital market services to persons within the Republic of Turkey without the prior approval of the Capital Market Board. However, according to article 15 (d) (ii) of the Decree No. 32, there is no restriction on the purchase or sale of the securities abroad by residents of the Republic of Turkey.

Poland: Distributed by UBS Limited (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce regulated by the Polish Financial Supervision Authority. Where an analyst of UBS Limited (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce has contributed to this document, the document is also deemed to have been prepared by UBS Limited (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce. Russia: Prepared and distributed by UBS Bank (OOO). Switzerland: Distributed by UBS AG to persons who are institutional investors only. UBS AG is regulated by the Swiss Financial Market Supervisory Authority (FINMA). **Italy:** Prepared by UBS Limited and distributed by UBS Limited and UBS Limited, Italy Branch. Where an analyst of UBS Limited, Italy Branch has contributed to this document, the document is also deemed to have been prepared by UBS Limited, Italy Branch. **South Africa:** Distributed by UBS South Africa (Pty) Limited (Registration No. 1995/011140/07), an authorised user of the JSE and an authorised Financial Services Provider (FSP 7328). **Israel:** This material is distributed by UBS Limited. UBS Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. UBS Securities Israel Ltd is a licensed Investment Marketer that is supervised by the Israel Securities Authority (ISA). UBS Limited and its affiliates incorporated outside Israel are not licensed under the Israeli Advisory Law. UBS Limited is not covered by insurance as required from a licensee under the Israeli Advisory Law. UBS may engage among others in issuance of Financial Assets or in distribution of Financial Assets of other issuers for fees or other benefits. UBS Limited and its affiliates may prefer various Financial Assets to which they have or may have Affiliation (as such term is defined under the Israeli Advisory Law). Nothing in this Material should be considered as investment advice under the Israeli Advisory Law. This Material is being issued only to and/or is directed only at persons who are Eligible Clients within the meaning of the Israeli Advisory Law, and this material must not be relied on or acted upon by any other persons. Saudi Arabia: This document has been issued by UBS AG (and/or any of its subsidiaries, branches or affiliates), a public company limited by shares, incorporated in Switzerland with its registered offices at Aeschenvorstadt 1, CH-4051 Basel and Bahnhofstrasse 45, CH-8001 Zurich. This publication has been approved by UBS Saudi Arabia (a subsidiary of UBS AG), a Saudi closed joint stock company incorporated in the Kingdom of Saudi Arabia under commercial register number 1010257812 having its registered office at Tatweer Towers, P.O. Box 75724, Riyadh 11588, Kingdom of Saudi Arabia. UBS Saudi Arabia is authorized and regulated by the Capital Market Authority to conduct securities business under license number 08113-37. **Dubai:** The information distributed by UBS AG Dubai Branch is intended for Professional Clients only and is not for further distribution within the United Arab Emirates. **United States:** Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG; or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a **'non-US affiliate'**) to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a document prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this document must be effected through UBS Securities LLC or UBS Financial Services Inc., and not through a non-US affiliate. UBS Securities LLC is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule"), and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule. Canada: Distributed by UBS Securities Canada Inc., a registered investment dealer in Canada and a Member-Canadian Investor Protection Fund, or by another affiliate of UBS AG that is registered to conduct business in Canada or is otherwise exempt from registration. **Mexico:** This report has been distributed and prepared by UBS Casa de Bolsa, S.A. de C.V., UBS Grupo Financiero, an entity that is part of UBS Grupo Financiero, S.A. de C.V. and is an affiliate of UBS AG. This document is intended for distribution to institutional or sophisticated investors only. Research reports only reflect the views of the analysts responsible for the reports. Analysts do not receive any compensation from persons or entities different from UBS Casa de Bolsa, S.A. de C.V., UBS Grupo Financiero, or different from entities belonging to the same financial group or business group of such. For Spanish translations of applicable disclosures, please see www.ubs.com/disclosures **Brazil:** Except as otherwise specified herein, this material is prepared by UBS Brasil CCTVM S.A. to persons who are eligible investors residing in Brazil, which are considered to be: (i) financial institutions, (ii) insurance firms and investment capital companies, (iii) supplementary pension entities, (iv) entities that hold financial investments higher than R\$300,000.00 and that confirm the status of qualified investors in written, (v) investment funds, (vi) securities portfolio managers and securities consultants duly authorized by Comissão de Valores Mobiliários (CVM), regarding their own investments, and (vii) social securities pot the Federal Government, States, and Municipalities. Hong Kong: Distributed by UBS Securities Asia Limited and/or UBS AG, Hong Kong Branch. Singapore: Distributed by UBS Securities Pte. Ltd. [MCI (P) 018/09/2015 and Co. Reg. No.: 198500648C] or UBS AG, Singapore Branch. Please contact UBS Securities Pte. Ltd., an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110); or UBS AG, Singapore Branch, an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110) and a wholesale bank licensed under the Singapore Banking Act (Cap. 19) regulated by the Monetary Authority of Singapore, in respect of any matters arising from, or in connection with, the analysis or document. The recipients of this document represent and warrant that they are accredited and institutional investors as defined in the Securities and Futures Act (Cap. 289). **Japan:** Distributed by UBS Securities Japan Co., Ltd. to professional investors (except as otherwise permitted). Where this document has been prepared by UBS Securities Japan Co., Ltd., UBS Securities Japan Co., Ltd. is the author, publisher and distributor of the document. Distributed by UBS AG, Tokyo Branch to Professional Investors (except as otherwise permitted) in relation to foreign exchange and other banking businesses when relevant. Australia: Clients of UBS AG, Holder of Australian Financial Services License No. 231087). Clients of UBS Securities Australia Ltd: Distributed by UBS Securities Australia Financial Services License No. 231098). This Document contains general information and/or general advice only and does not constitute personal financial product advice. As such, the Information in this document has been prepared without taking into account any investor's objectives, financial situation or needs, and investors should, before acting on the Information, consider the appropriateness of the Information, having regard to their objectives, financial situation and needs. If the Information contained in this document relates to the acquisition, or potential acquisition of a particular financial product by a 'Retail' client as defined by section 761G of the Corporations Act 2001 where a Product Disclosure Statement would be required, the retail client should obtain and consider the Product Disclosure Statement relating to the product before making any decision about whether to acquire the product. The UBS Securities Australia Limited Financial Services Guide is available at: www.ubs.com/ecs-research-fsg. **New Zealand:** Distributed by UBS New Zealand Ltd. The information and recommendations in this publication are provided for general information purposes only. To the extent that any such information or recommendations constitute financial advice, they do not take into account any person's particular financial situation or goals. We recommend that recipients seek advice specific to their circumstances from their financial advisor. Korea: Distributed in Korea by UBS Securities Pte. Ltd., Seoul Branch. This document may have been edited or contributed to from time to time by affiliates of UBS Securities Pte. Ltd., Seoul Branch. Malaysia: This material is authorized to be distributed in Malaysia by UBS Securities Malaysia Sdn. Bhd (Capital Markets Services License No.: CMSU/A0063/2007). This material is intended for professional/institutional clients only and not India: Distributed by UBS Securities India Private Ltd. (Corporate Identity Number U67120MH1996PTC097299) 2/F, 2 North for distribution to any retail clients. Avenue, Maker Maxity, Bandra Kurla Complex, Bandra (East), Mumbai (India) 400051. Phone: +912261556000. It provides brokerage services bearing SEBI Registration Numbers: NSE (Capital Market Segment): INB230951431, NSE (F&O Segment) INF230951431, NSE (Currency Derivatives Segment) INE230951431, BSE (Capital Market Segment): INB010951437; merchant banking services bearing SEBI Registration Number: INM000010809 and Research Analyst services bearing SEBI Registration Number: INH000001204. UBS AG, its affiliates or subsidiaries may have debt holdings or positions in the subject Indian company/companies. Within the past 12 months, UBS AG, its affiliates or subsidiaries may have received compensation for non-investment banking securities-related services and/or non-securities services from the subject Indian company/companies. The subject company/companies may have been a client/clients of UBS AG, its affiliates or subsidiaries during the 12 months preceding the date of distribution of the research report with respect to investment banking and/or non-investment banking securities-related services and securities are services and securities and securities are services and securities are securities are securities and securities are securities are securities are securities and securities are sec regard Annual to information associates, please refer Report http://www.ubs.com/global/en/about_ubs/investor_relations/annualreporting.html

The disclosures contained in research documents produced by UBS Limited shall be governed by and construed in accordance with English law.

UBS specifically prohibits the redistribution of this document in whole or in part without the written permission of UBS and UBS accepts no liability whatsoever for the actions of third parties in this respect. Images may depict objects or elements that are protected by third party copyright, trademarks and other intellectual property rights. © UBS 2016. The key symbol and UBS are among the registered and unregistered trademarks of UBS. All rights reserved.

